Warning Systems, Risk Communication, and New Social Media:
How Technological Innovation is Changing the Landscape for Disaster Communications

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The Numbers

- More than 270 million Americans (87% of the population) own a wireless device
- 90% of Americans are within 3 feet of their mobile device 24 hours a day
- Twitter – more than 7 million users
- Facebook – more than 200 million users
- YouTube – 65,000 new videos each day
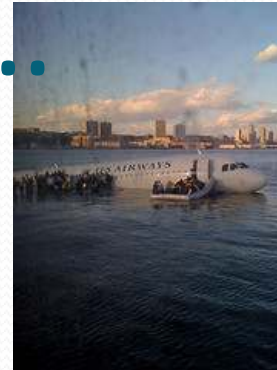- MySpace – 30 million users

A few recent events...

Virginia Tech, April 2007

Sichaun China EQ, May 2008

Mumbai, Dec 2008

US Airways Crash, Jan 2009

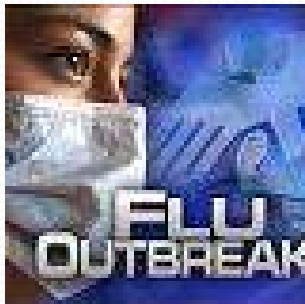Australian Bushfires Jan 2009

Red River Flood March 2009

Iran Election Protests 2009

H1N1 outbreak

Philippines, October 2009

American Samoa, October 2009

Haiti EQ January 2010

A Few Technologies of Note…
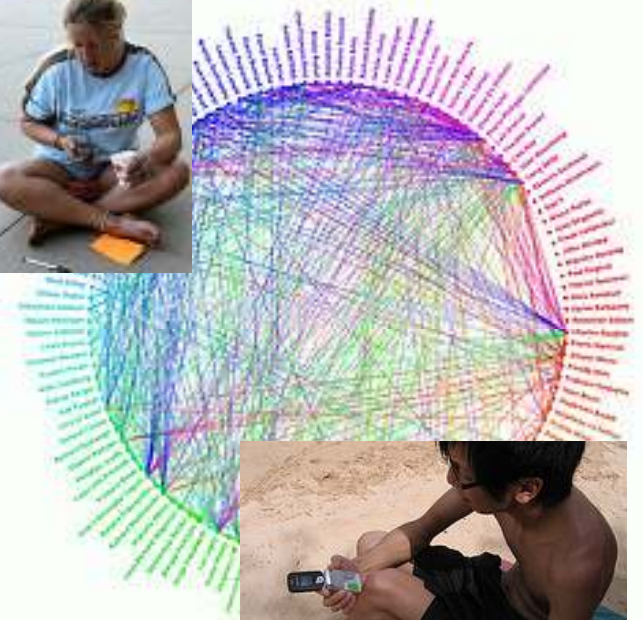
What's social about social media?

Web 1.0

producer ⟶ *consumer*

WEB 2.0

Communication systems are changing

- Greater access to information
- More sources of information
- Faster sharing
- Networked communications
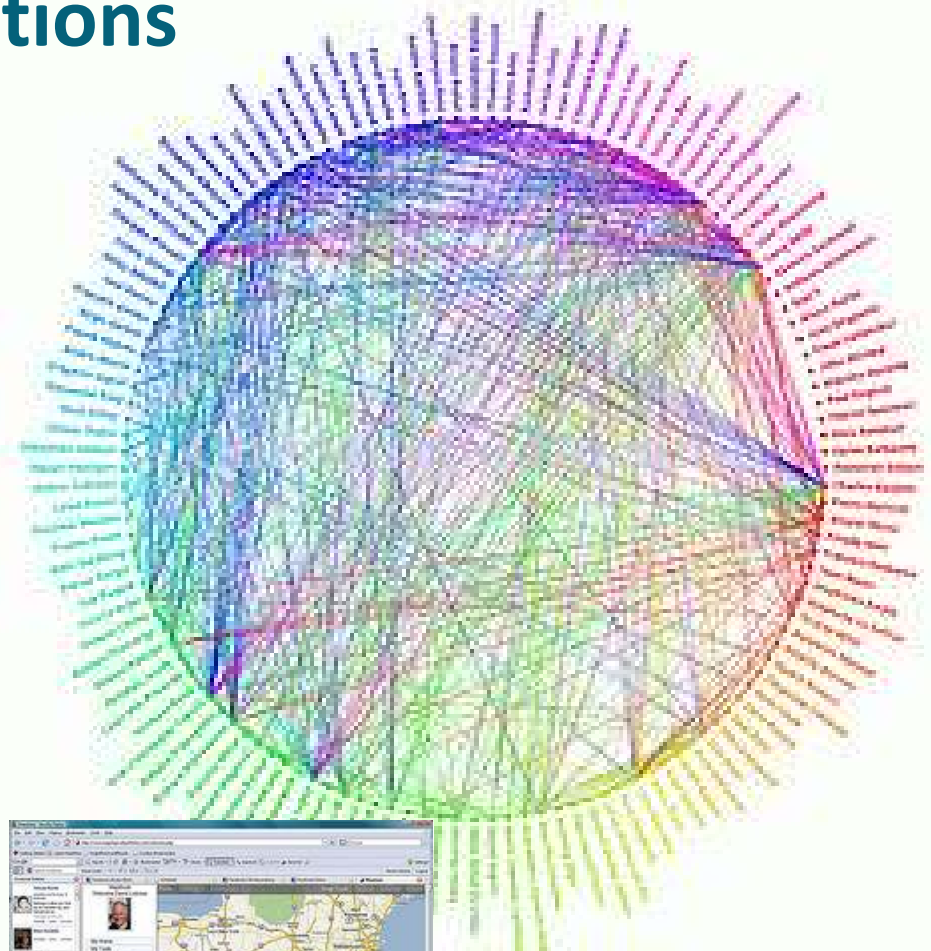- Public participation; no longer dependent on top-down communications

Hierarchical communications

Networked communications

What does this mean?

- Minor events become magnified by Web 2.0
  - If you enter the conversation in the middle of disaster, its too late
- The public can be a source of information in disaster
- The public expect communications through multi-media channels
- Calls for transparency are increasing

Empirical research

- 2007 Virginia Tech School Shooting
- 2007 Southern California Wildfires
- 2008 Democratic National Convention
- 2008 Tennessee Valley Coalash Disaster

Virginia Tech School Shooting

- April 16, 2007
- Blacksburg, VA
- Two events: 7:15 am & 9:30 am
- 1 shooter, 32 deaths, multiple casualties

- *Collective Intelligence observed*

2007 Southern California Wildfires

- Started in Malibu, CA, October 20, 2007
- Over 20 blazes ignited from Santa Barbara to Mexico border
- Destroyed nearly 1500 homes
- Burned over 500,000 acres of land
- Massive evacuations

- *Back-channel communications*

Democratic National Convention 2008

- National Special Security Event
- International attention
- Significant probability for public disruption

- *Lack of attention to social media*

Tennessee Valley Coalash Disaster

- Twenty times worse than the Exxon Valdez Oil Spill
- Use of Twitter to broadcast event news
- Niche group of users, distributed efforts
- Lack of rumor
- Misinformation corrected by users

Decentralized communication is not disorganized communication

- Organized
- Self-correcting
- Accurate
- Concentrated

Social media are a source of information about the public

- Can observe milling online
- "Chatter" can lead to situational awareness
- Misinformation has value as well

Social media use is a benefit to the disaster affected community

- Online social convergence
- Seeking and sharing information
- Organizing resources
- Coping and mental health

Has the potential to develop and strengthen community resiliency

Social media are another channel to disseminate information

- To push information out
- To provide up-to-the minute updates
- Not reliant on major media

Social media use is becoming routinized in disaster

- Distributed technology users create mashups
- Local technology users share local information

Social behaviors offline and on...

Common in the immediate aftermath of disasters
- Convergence
- Altruism

Uncommon in the immediate aftermath of disaster
- Anti-social behaviors
- Panic, looting, malicious attacks

Dangers of disaster myths

- Amplified risk
- Detoured resources
- Misappropriated personnel
- Lives are lost

What concerns *should* be raised?

- Accessible
- Actionable
- Accurate

Integrating social media into the *official* communications landscape

- Incident Command System
  - Intelligence, Operations, Public Information
- Policies
- Plans
- Procedures

   To create a more disaster resilient community

Questions? Comments? Feedback?

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